

✓ OSLO AND PARIS CONVENTIONS FOR THE PREVENTION OF MARINE POLLUTION
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Monitoring of Seabirds as Oil Victims

Presented by Germany

Introduction

A study on seabirds as oil victims was performed by the Nord-deutsche Naturschutzakademie under contract to the Federal Environmental Agency. On a selected number of sampling routes (25 km) along the German North Sea coast oiled seabirds were counted, collected and examined. The aim of the study was to obtain information about the extent of chronical oil pollution after the introduction of an "oil residue disposal service" offered free of charge in German ports. The seabirds were used as bioindicators. The results of a preceding project carried out from 1984 to 1988 were used for comparison.

Number of oil victims

From 1988 to 1992, 3,638 dead birds of 36 species were found. 860 of these birds were oiled. Dead, externally oiled birds found were for the most part guillemots, razorbills, kittiwakes and eider ducks. In recent years the number of birds found has decreased, as has the number of oiled birds (figure 1). The oiling rate - the percentage ratio of oiled birds to total number of dead birds - averaged 41.3% from 1984 to 1988 and declined to 23.6% from 1988 to 1992.

Oil analyses

Samples of oiled birds' feathers and of oil-polluted beaches were collected to clarify the question as to the sources of chronic oil pollution in the German Bight. The samples were analyzed at the Bundesamt für Seeschifffahrt und Hydrogeographie, using UV fluorescence spectroscopy and gas chromatography (DAHLMANN 1984).

nonylphenol
Between 1983 and 1992, the analytical results did not change significantly in their basic features (figure 2). Some 90% of oiled seabirds still fall victim to illegal discharges of fuel residues. Other kinds of oiling, caused for example by crude oil, paraffins, chemicals, etc., play a secondary role in terms of their numbers. The chemicals detected include, for example, nonylphenol and dodecylphenol. Following transformation into the water-soluble nonylphenol ethoxylate, nonylphenol serves as cleaning agent or as an emulsifier, e. g. for palm oils transported in tankers. As "raw product" nonylphenol is transported across the seas in tankers (AVERBECK 1990).

Discussion

The oil residue disposal service introduced in 1988 and offered free of charge in all German ports has presumably caused oil pollution to decrease so that in areas near the coast and along shipping routes birds came into contact with oil less frequently. Nevertheless, now as in the past approx. 90% of the feather samples are oiled by bunker C oils. The oiling rates ascertained for the German Bight are lower than those for the Netherlands and Denmark, but markedly higher than those for the Shetlands and Norway.

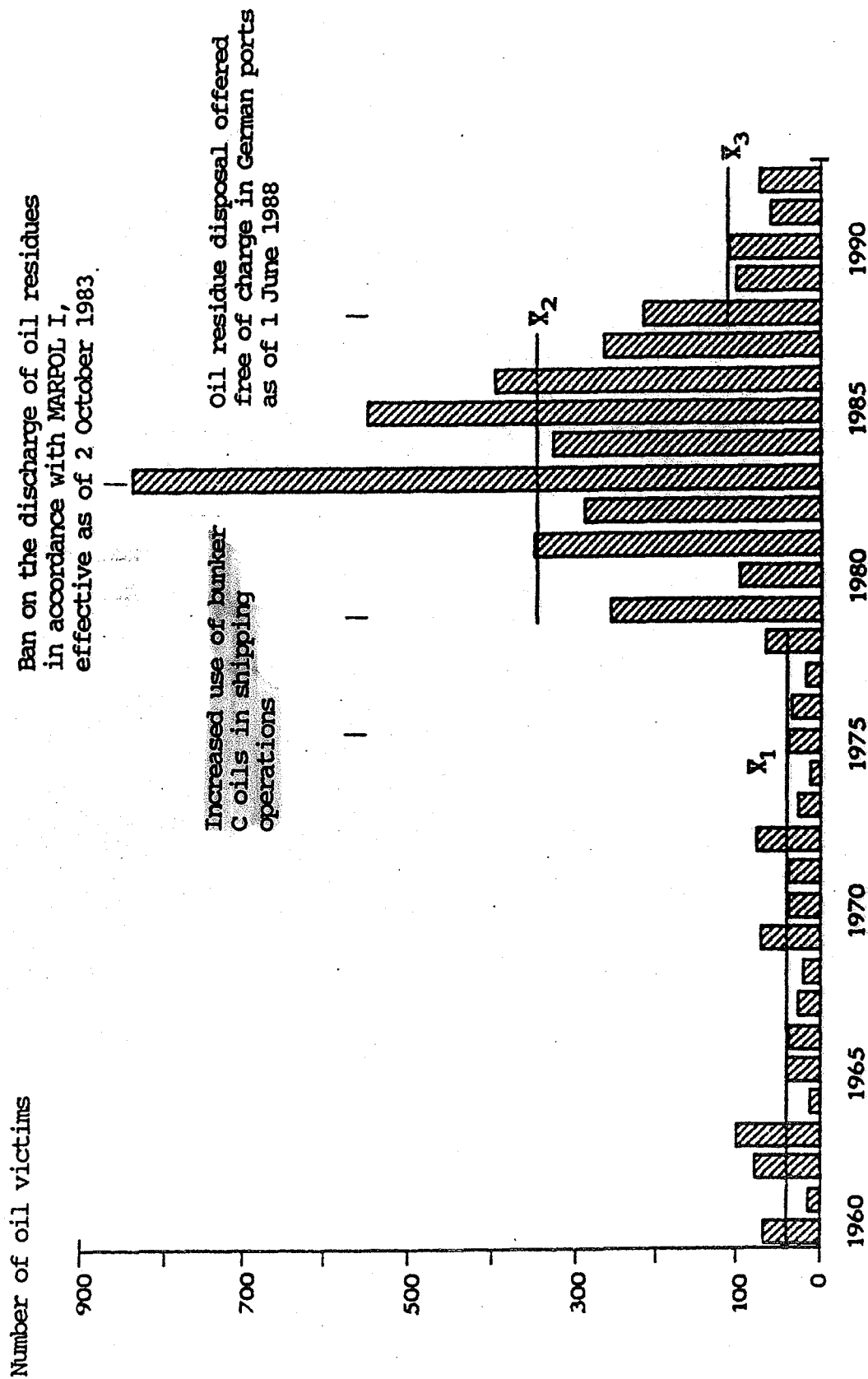
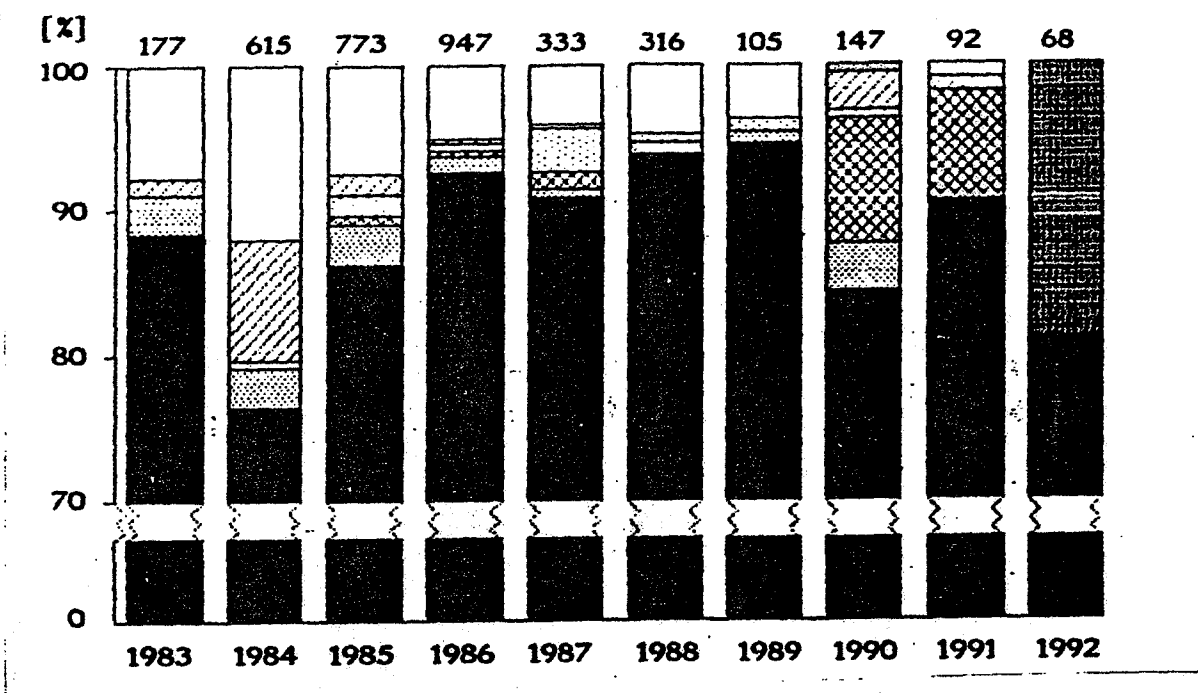


Figure 1: Number of oiled birds found on Helgoland between 1960* and 1992



n: Number of feather samples analyzed

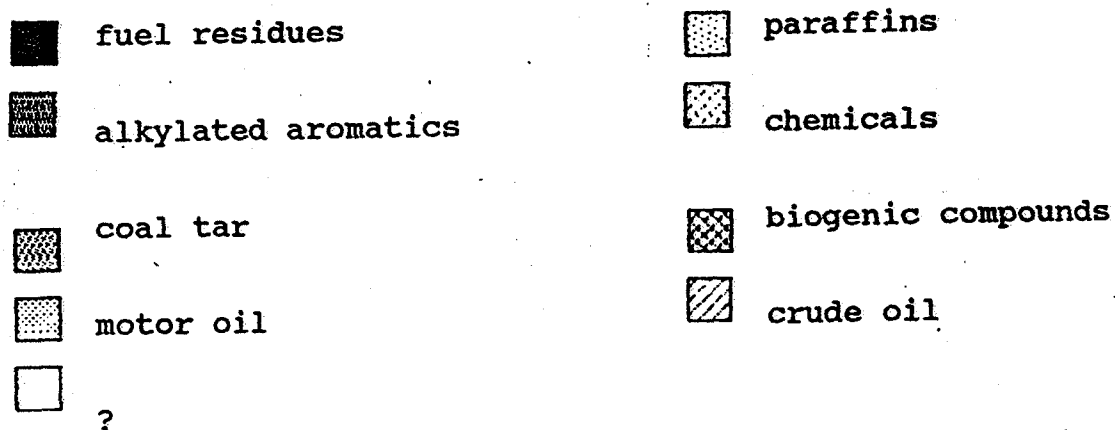
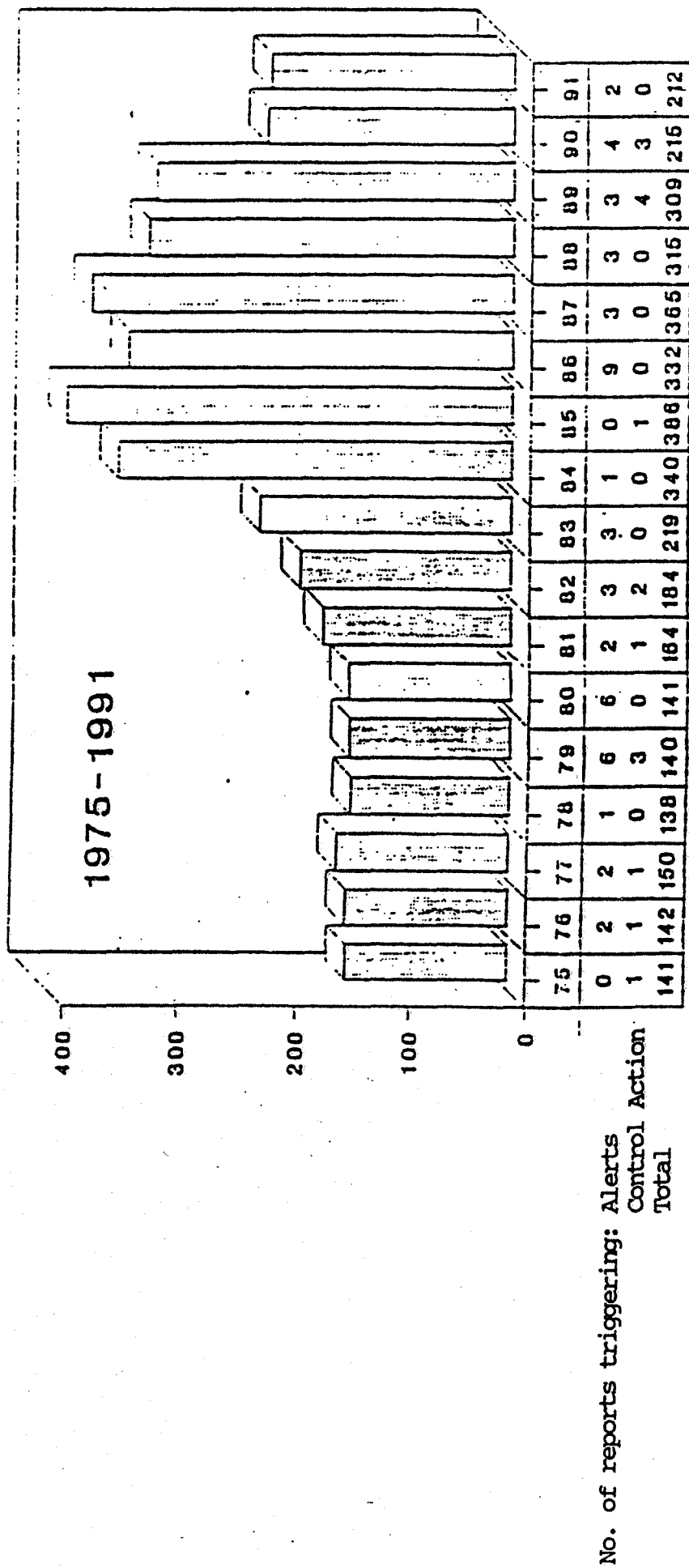


Figure 2: Results of oil analyses in feather samples



Total

Figure 3: Overview of reports of oil pollution
- Central reporting unit in Cuxhaven -